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Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard. 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)

IDENTITY (As Used on Label and List)

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: Monier Resources, Inc.

Address (Number, Street, City, State, and ZIP Code): 45 N.E. Loop 410, Suite 700, San Antonio, Texas 78216

Emergency Telephone Number: (512) 349-4069

Telephone Number for Information:

Date Prepared: November 18, 1985

Signature of Preparer (optional):

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s)) | OSHA PEL | ACGIH TLV | Other Limits Recommended | % (optional)

1. Fly ash composition is variable depending on coal source and power plant characteristics.
2. Fly ash has a respirable particle size distribution.
3.

COMPONENT	FORMULA	CAS	OSHA PEL	ACGIH TLV	TYPICAL %
Silica:Amorphous	SiO_2	7631-86-9	$30mg/m^3/\%SiO_2$	20MPPCF	16.6-45.6
Silica:Crystalline(Respirable)	SiO_2	14808-60-7	$10mg/m^3/(\%SiO_2+2)$	$10mg/m^3/(\%SiO_2+2)$	3.4-9.4
Alumina (Respirable)	Al_2O_3	1344-28-1	$5mg/m^3$	$5mg/m^3$	10-35
Calcium Oxide	CaO	1305-78-8	$5mg/m^3$	$2mg/m^3$	0.5-32
Titanium Dioxide (Respirable)	TiO_2	13463-67-7	$5mg/m^3$	$5mg/m^3$	0.33-2
Ferric Oxide	Fe_2O_3	1309-37-1	$10mg/m^3$	$5mg/m^3$	3-24
Magnesium Oxide	MgO	1309-48-4	$15mg/m^3$	$10mg/m^3$	0.5-8

4. Materials present at less than 12% and greater than 0.5%, and not listed in OSHA or ACGIH include Potassium Oxide, Sodium Oxide, Sulfur Trioxide, and Carbon.

Section III — Physical/Chemical Characteristics

Boiling Point	NA	Specific Gravity (H_2O = 1)	NA
Vapor Pressure (mm Hg.)	NA	Melting Point	NA
Vapor Density (AIR = 1)	NA	Evaporation Rate (Butyl Acetate = 1)	NA

Solubility in Water: Not soluble.

Appearance and Odor: Grayish white to black powder; odorless.

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	NA	Flammable Limits	NA	LEL NA	UEL NA

Extinguishing Media: NA

Special Fire Fighting Procedures: NA

Unusual Fire and Explosion Hazards: None

Section V — Reactivity Data

Stability			Conditions to Avoid
	Unstable		NA
	Stable	X	

Incompatability (Materials to Avoid): None

Hazardous Decomposition or Byproducts: None

Hazardous Polymerization			Conditions to Avoid
	May Occur		NA
	Will Not Occur	X	

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? Yes Skin? No Ingestion? No

Health Hazards (Acute and Chronic): Materials present in fly ash, listed in Section II, when considered as separate materials may cause respiratory tract irritation and silicosis (silica) with long term exposure.

Carcinogenicity: NTP? NA IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure: Irritation of eyes, nose and throat.

Medical Conditions Generally Aggravated by Exposure: Persons with history of respiratory illness and reduced pulmonary function should avoid work places which have high dust levels.

Emergency and First Aid Procedures: Flush with water, wash skin with soap and water, move person to fresh air, perform artificial respiration, keep warm and at rest, get medical attention.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled: Clean-up material for use or disposal. Use fine water spray to reduce dusting (airborne dust). If loaded on trucks, wet down ash to prevent dusting during transport. Clean-up personnel should use a respirator if excessive dusting occurs during clean-up.

Waste Disposal Method: Landfill or ash disposal pond. Dispose in keeping with state and local regulatory agency requirements. Fly ash is not a RCRA listed hazardous waste.

Precautions to Be Taken in Handling and Storing: Avoid conditions which result in dusting and in uncontrolled runoff of rainwater from storage areas.

Other Precautions: Water which contacts fly ash, such as rainfall runoff from storage or disposal piles, will have an altered pH. Use or disposal of such water must be appropriately controlled.

Section VIII — Control Measures

Respiratory Protection (Specify Type): Single use, replaceable or reuseable filters for dusts:MSHA/NIOSH Approval #TC-21C-XXX

Ventilation		
	Local Exhaust: Yes, when practical to capture dust at source of generation.	Special: None
	Mechanical (General): Yes, for indoor work places.	Other: None

Protective Gloves: Normal work gloves

Eye Protection: Safety goggles in dusty operations

Other Protective Clothing or Equipment: None

Work/Hygienic Practices: Normal; use respiratory protection in dusty work places.